

	TRAVIS COUNTY ESD #5 MANCHACA FIRE RESCUE Department Policy	B101.1
	Authorized by:  Fire Chief Chris Barron	Effective: 2-3-2020 Rescinds: Reference: TCFP/NFPA 1581 Application: Shift Personnel
Use, Inspection, & Care of PPE		

I. Purpose

To establish a policy addressing evaluation, procurement, care, maintenance, replacement, and appropriate use of Personal Protective Clothing.

II. Background

The Texas Commission on Fire Protection (TCFP) has adopted the provisions of NFPA 1851: Selection, Care, and Maintenance of Structural Fire Fighting Protective Ensembles to provide guidance on proper selection, use, inspection, care, and retirement of structural PPE. Additionally, MFR issues PPE for non-structural firefighting events such as vehicle rescue and wildland firefighting. This policy ensures that personnel have access to all appropriate PPE and are knowledgeable in the proper use and care of all PPE.

III. Policy

A. Administration of program. The PPE/Uniform Manager shall administer and supervise the issuing, exchange, purchase, retirement, and inspection of department issued PPE. Requests for PPE or maintenance needs should be directed to the PPE/Uniform Manager.

1. **Selection of PPE.** Before PPE is purchased, a risk assessment shall be conducted to determine the appropriate type and style of PPE for the mission and hazards present. The risk assessment shall be reviewed every two years.
2. **Documentation.** The PPE/Uniform Manager shall maintain inventory, maintenance, repair, and advanced inspection/cleaning records on Department PPE. Additionally, the Manager will ensure that PPE manufacturer’s instructions are available to all members. Per NFPA 1851, the following information shall be maintained for each protective ensemble or ensemble element:
 - a. Person to whom the element is issued
 - b. Date of issue and condition when issued
 - c. Manufacturer and model name or design of the element
 - d. Manufacturer’s identification number, lot number, or serial number
 - e. Month and year of manufacture of the element
 - f. Date(s) and findings of advanced inspections

- g. Date(s) and findings of advanced cleaning, disinfection, or sanitization, or specialized cleaning
- h. Reason(s) for and who performed advanced cleaning, disinfection, or sanitization, or specialized cleaning
- i. Date(s) of repair(s), who performed repair(s), and brief description of repair(s)
- j. Date of PPE retirement
- k. Date and method of disposal

3. **Training of personnel.** The Manager shall ensure that all full time personnel are trained on the proper operation of the gear washer/extractor. Additionally, the Manager will ensure that all members are trained in how to perform a routine inspection of their PPE.

4. **Advanced service and inspection.** The Manager will ensure that structural PPE is inspected on an annual basis by a properly certified vendor. The vendor inspection will be compliant with the current edition of NFPA 1851 and include a complete inspection of the PPE liner. The Manager will also serve as the liaison with the vendor for any technical decontamination or repairs needed to PPE. All repairs shall be made with like materials and in compliance with NFPA 1971.

5. **Emergent needs.** If there is an emergent need for PPE replacement or exchange, the Officer (including Acting Officers) will facilitate the replacement or exchange. The Officer will log the items involved in the change out and tag any out of service items. The PPE/Uniform Manager will be notified event so the PPE tracking database may be updated and proper follow-up actions taken.

6. **Service life of PPE.** Structural firefighting ensembles and their elements shall be retired from service after no more than 10 years from the manufacture date of the ensemble or element.

a. **Retirement of elements.** Retired structural firefighting ensembles and elements shall be physically destroyed or disposed of in a manner that ensures that they will not be used in any firefighting or emergency operations (including live fire training).

1) **Training use.** Retired ensembles and elements may be used for training purposes that does not involve live fire operations. "Training gear" must be permanently marked with an X in a manner that its status is obvious when the gear is worn.

2) **Donation.** Retired ensembles and elements may be segregated and tagged as out of service and donated to organizations outside of the United States.

B. **Full protective clothing.** The term "full protective clothing" is defined as follows:

1. **Structural.** For structural PPE, "full protective clothing" consists of structural helmet, hood, coat, pants (with suspenders if designed to use suspenders), gloves, and boots.

2. **Extrication.** "Full protective clothing" for vehicle extrication consists of the wildland or structural helmet, extrication rated coat and pants or structural coat and pants, medical gloves and outer gloves (structural, extrication style, or leather work gloves), wildland or structural boots, and primary eye protection (safety glasses or goggles).

3. **Wildland.** “Full protective clothing” for wildland firefighting consists of wildland helmet with neck shroud or hood, wildland rated coat or shirt, wildland rated pants, fire shelter, wildland boots, leather work gloves, and primary eye protection (safety glasses or goggles).

C. **Issued PPE.** Members of ESD5 will be issued the following PPE. PPE may be department purchased PPE or rented PPE depending on budgetary constraints and a member’s probationary status.

1. **Structural PPE.**

- a. Structural helmet in rank specific color (White = Chief Officer, Red = Captain, Orange = Lieutenant, Driver = Yellow, Firefighter = Yellow)
- b. Hood (2 hoods are issued to provide the member with a ready spare)
- c. Bunker coat
- d. Bunker pants
- e. Suspenders (if pants are designed for suspender use)
- f. Structural firefighting gloves
- g. Structural firefighting boots
- h. Goggles and/or safety glasses

2. **Wildland PPE.**

- a. Wildland helmet with neck shroud
- b. Wildland coat
- c. Wildland pants
- d. Wildland boots
- e. Fire shelter with harness
- f. Leather work gloves
- g. Goggles and/or safety glasses

3. **Vehicle extrication PPE.**

- a. Depending on availability, members may be issued dual-certified wildland/extrication gear consisting of a coat and pants. For a full description of PPE deemed acceptable for vehicle extrication incidents, refer to section III.B.2, above.

D. **Use of PPE.** Members engaged in incident operations beyond the cold zone (command post, base, or rehab) shall utilize full protective clothing appropriate for the incident type. It is the intent of this rule for any member that is in close proximity to incident activity or hazards wear full protective clothing.

E. **Training and tool operation.** Appropriate PPE shall be worn during training exercises and when operating, checking, or maintaining equipment.

F. **Use of PPE outside of ESD5.** PPE issued by ESD5 shall not be utilized for off duty activity purposes without department approval. Members attending outside training with department approval/authorization is considered on duty use of PPE.

- G. **Non-issued PPE.** Individually purchased PPE or PPE from another agency must be preapproved for use at ESD5. Non-issued PPE is subject to the same testing, inspection, and decommissioning requirements as department issued PPE. Additionally, use of outside PPE may be denied for nonconformity with department standards or markings. Members wishing to use outside PPE must provide documentation to the PPE/Uniform Manager that the PPE meets NFPA 1851 requirements before the PPE is used in ESD5.
- H. **Alteration of PPE.** Neither the Department, nor its members, shall alter any PPE ensemble element without the written approval of the manufacturer.

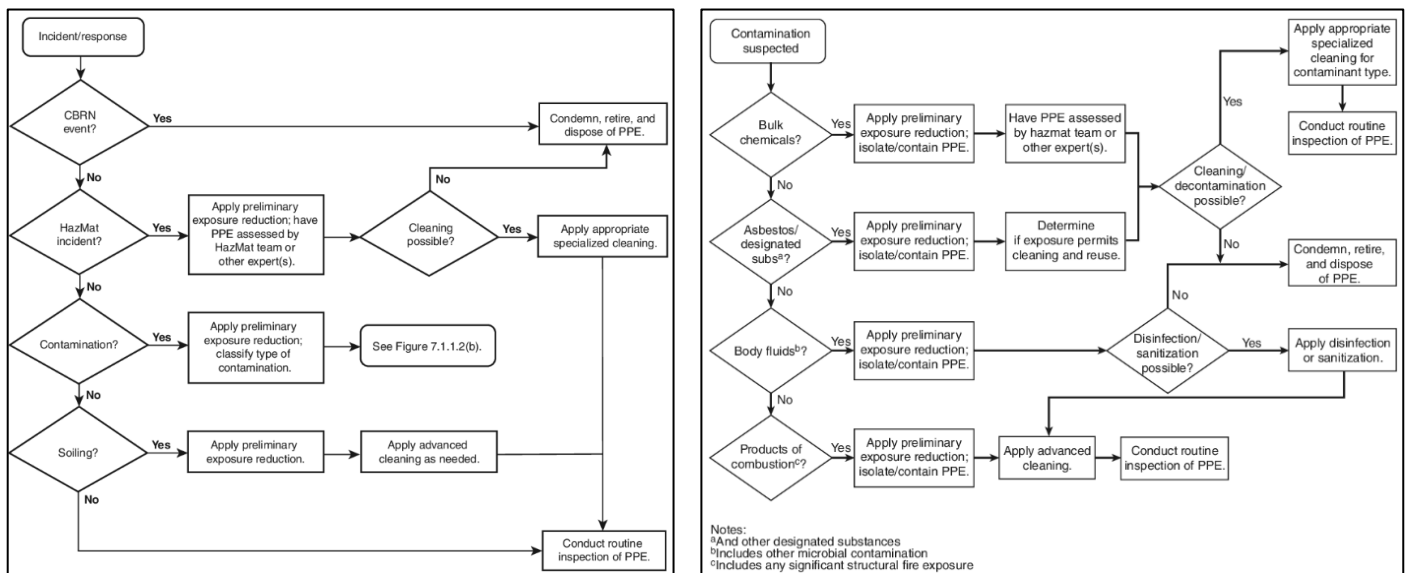
IV. Procedure

- A. **Routine inspection of PPE.** Members should inspect their PPE when coming on duty and after each use. Members should confirm that all components are present, clean, and in good repair.
 - 1. **Handling of PPE.** When handling PPE for inspection or cleaning, minimum PPE shall be the use of nitrile medical gloves. The use of long-sleeved aprons and respirators may also be considered based on the level of contamination.
 - 2. **General inspection.** All components of the firefighter's structural PPE ensemble should be inspected for the following items:
 - a. Soiling of ensemble items
 - b. Contamination of ensemble items
 - c. Physical damage, such as rips, tears, cuts, missing or damaged hardware or closure systems, or thermal damage such as charring, burn holes, melting, or discoloration
 - d. Damaged or missing reflective trim
 - e. Loss of seam integrity and broken or missing stitches
 - 3. **Specific inspection items.** In addition to the general inspection, specific ensemble items need to be inspected for:
 - a. **Coat and Pants.** The shell and liner should be sized and assembled correctly.
 - b. **Drag Rescue Device (DRD).** The DRD should be properly installed in the coat.
 - c. **Hood.** The hood should not exhibit a loss of face opening adjustment.
 - d. **Helmet.** The helmet suspension and retention system should be inspected for any damaged or missing components. The faceshield/goggle system should not have any missing or damaged components (discoloration, crazing, scratches that may limit visibility).
 - e. **Gloves.** Gloves should be inspected to ensure the inner liner of the glove has not been inverted and there has been no shrinkage or loss of elasticity/flexibility.
 - f. **Footwear.** Boots/Footwear should not have any damage that would expose or deform the protective toe, protective midsole, or shank. The boots should not exhibit any evident of a loss of water resistance.

g. **Interface components.** Interface components should not exhibit a loss or reduction of properties that allow a component to continue as an effective interface (loss of shape, inability to remain attached where attachment points are required)

4. **Reference material.** The instruction and care manuals for PPE will be available in the watch office of station 501 so that members are familiar with the recommended care of their PPE.

B. **Cleaning of PPE.** PPE should be kept as clean as possible and not allowed to remain contaminated with the byproducts of combustion or biological hazards after an incident. PPE is considered soiled if there is visible foreign material transferred to the PPE. PPE is also considered soiled if it has been worn inside an IDLH atmosphere. Evidence of soiled PPE necessitates cleaning. Cleaning may be routine cleaning, advanced cleaning, specialized cleaning, or contract cleaning. The two decision tree illustrations below should be used in determining the cleaning approach necessary based on the type of contamination.



1. **Preliminary exposure reduction.** PPE exposed to contaminants at an incident scene shall undergo preliminary cleaning procedures to deduce contaminants and exposure potential to personnel. Refer to policy B108: Firefighter Cancer Prevention for additional details and procedures on conducting preliminary exposure reduction.

2. **Advanced cleaning.** Advanced cleaning involves the thorough cleaning of the PPE by washing with cleaning agents. Advanced cleaning usually involves the PPE being taken out of service temporarily. Examples include machine washing via the department’s front loading extractor, hand-washing elements that cannot be machine washed in a utility sink with mild liquid soap and a soft bristle brush, and contract cleaning. Advanced cleaning is required if the following conditions are present:

- a. **IDLH exposure.** The PPE was worn within an IDLH atmosphere.
- b. **Odor.** There is an obvious odor that cannot be removed by routine cleaning
- c. **Soiling.** Any visible soiling of the PPE
- d. **Hazardous chemicals.** The PPE is known to have been exposed to a hazardous chemical.
- e. **Biohazard.** The PPE is known to have been exposed to a biohazard.

f. **No semi-annual advanced cleaning.** The PPE has not been subjected to an advanced cleaning within the past 6 months.

3. **Specialized cleaning.** PPE contaminated with body fluids shall be cleaned through advanced cleaning procedures. Bleach should not be used to clean PPE. PPE elements that are not machine washable shall be cleaned in a utility sink with mild detergent and a soft brush.

4. **Drying of PPE.** PPE elements should be air dried in an area with good ventilation and away from direct sunlight. PPE should not be reassembled or stored until it has completely dried. Drying at the station will occur in either the gear storage room or the apparatus bay. Gear will not be placed in any other portion of the station to dry.

C. **Storage of PPE.** Department issued PPE should normally be stored at the station.

1. **Prohibited areas.** PPE shall not be worn, carried through, or stored in the living quarters of the fire station. Storage of PPE is limited to the truck bay, gear storage area, and apparatus.

2. **Traveling with PPE.** If a member will be traveling with PPE by personal vehicle (i.e. for a training class), they should utilize a gear storage bag or large trash bag to isolate the PPE and prevent cross contamination. The gear should be transported outside of the passenger compartment if possible.

3. **Limiting cross contamination.** Whenever possible, PPE should not be worn at incidents where it is not typically needed for the incident type (i.e. wearing bunker pants to a medical call in a residence).

D. **Proper wearing of PPE.** PPE should be worn in a manner that fully utilizes the protection afforded by all of the components. (i.e. chin straps secure, flaps and coats properly closed and fastened, collars up, ear flaps down, etc.). Helmet shields are considered secondary eye protection and do not replace the use of safety glasses or goggles as primary eye protection.

E. **Donning for response.** Whenever possible, members should don their PPE before responding to an incident. At no time should a member remove their seatbelt in a moving apparatus including for the purpose of donning PPE. Apparatus drivers and command personnel may opt to don PPE after arrival on scene.

1. **Driver's PPE.** Drivers operating pumps on the fireground shall don full protective clothing as soon as their initial line is charged. Drivers who are a member of the Outside Team to meet 2-in/2-out shall don full protective equipment and SCBA before interior attack is started.

2. **Support personnel.** Support personnel will maintain the same level of protective clothing and equipment as the firefighters who are on the fireground. Personnel not wearing appropriate protective clothing or equipment shall remain outside the fireground.

3. **Command post.** Personnel operating at the Command Post will not be required to wear protective clothing. Personnel who leave the Command Post and enter the fireground shall wear full protective clothing.
 4. **Roadway incidents.** If a member is working on or near a roadway and not directly involved in firefighting operations, they should wear an ANSI-compliant traffic vest. Members wearing the black cold weather jacket or a bunker coat should wear the traffic vest over the coat.
- F. **Reduction in PPE.** If the level of risk at an incident allows for a safe reduction in the amount of PPE worn, Command or the Safety Officer can authorize a reduction in protection. Risks from fireground hazards should be weighed against the risks presented by heat stress, fatigue, and visibility with considering a reduction in PPE use. SCBA should still be utilized if atmospheric conditions addressed in B102: Use, Inspection, & Care of SCBA and PASS warrant its continued use.
1. **Heat stress.** When heat stress is a concern, members should remove as much PPE as possible while on breaks or in rehab.
- G. **Critical events.**
1. **Preservation of PPE.** Should a member be a victim of a serious injury or fatality while wearing PPE, all PPE worn by the member must be immediately removed from service and preserved. The PPE should be photographed as early as possible after the event and then secured. Custody of the PPE must be maintained and tracked and access limited to maintain the chain of custody for investigation purposes.
 2. **Reporting health and safety concerns.** If an injury, illness, health, or safety concern occurs because of a known or suspected failure of an element of the PPE ensemble, the manufacturer of the element shall be notified in writing as well as the organization responsible for certification of the element. Any injury resulting in more than one day of lost work time shall be reported.
 3. **Storage of PPE.** All of the PPE elements shall be nondestructively tagged and stored in paper or cardboard containers. PPE involved in a member's serious injury or fatality shall not be stored in plastic or airtight containers.
 4. **Examination of PPE.** An outside investigator and/or experts shall be utilized to examine any PPE involved in a member's serious injury or fatality.